

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (original): A method for determining an operational condition of a particle detection system, the particle detection system comprising at least one sample inlet for receiving a sample flow from a monitored region, the method comprising the step of:

conducting an upstream measurement of a flow rate through the at least one sample inlet.

Claim 2 (original): A method of testing the operation of pollution monitoring equipment, the method comprising the steps of:

measuring the upstream flow rate through at least one sampling inlet of a particle detector system;

determining an operational condition of the pollution monitoring equipment in accordance with the measured flow rate.

Claim 3 (original): A method as claimed in claim 2 further comprising the steps of: repeating the step of measuring the upstream flow rate after a predetermined time interval;

determining the operational condition by comparing respective flow rate measurements.

Claim 4 (original): A method as claimed in claim 3 wherein the predetermined time interval, comprises one or more of:

the occurrence of an incident;
the occurrence of a maintenance action;
regular calendar periods.

Claim 5 (currently amended): A method as claimed in claim 3 ~~or 4~~ wherein:
the step of measuring the upstream flow rate, in the first instance, is performed upon one of:

installation;
cleaning and;
repair of the pollution monitoring equipment.

Claim 6 (currently amended): A method as claimed in ~~any one of claims~~ claim 2
~~to 5~~ wherein the pollution monitoring equipment comprises one or more of:

at least one sampling inlet of an aspirated particle detector system;
a particle detector;
a sampling pipe network of an aspirated particle detector system;
a portion of a sampling pipe network of an aspirated particle detector system;
an aspirated particle detector system.

Claim 7 (currently amended): A method as claimed in ~~any one of claims~~ claim 1
~~to 6~~ wherein the step of measuring the flow rate is performed using an ultrasonic flow sensor.

Claim 8 (currently amended): A method as claimed in ~~any one of claims~~ claim 1
~~to 7~~ wherein the step of measuring the flow rate is performed at a point remote from the
sampling inlet, at or near ground level.

Claim 9 (currently amended): A method as claimed in ~~any one of claims~~ claim 1
~~to 8~~ wherein the operational condition comprises one or more of:

- a) particle detection system sensitivity;
- b) particle detector sensitivity;
- c) sampling pipe network obstruction;
- d) sampling inlet obstruction.

Claim 10 (original): Testing apparatus for pollution monitoring equipment of a particle
detector system, the apparatus comprising:

a flow sensor arrangement adapted to form a sealed fluid communication path between a
flow sensor and a sampling inlet of the detector system, wherein the flow sensor determines the
flow rate through the sampling inlet so as to allow a determination of an operating condition of
the pollution monitoring equipment.

Claim 11 (original): Apparatus as claimed in claim 10 wherein the pollution monitoring equipment comprises one or more of:

at least one sampling inlet of an aspirated particle detector system; a particle detector;
a sampling pipe network of an aspirated particle detector system;
a portion of a sampling pipe network of an aspirated particle detector system; an aspirated particle detector system.

Claim 12 (original): Testing apparatus for testing a particle detector system comprising:
a connector adapted to sealingly engage a sampling inlet of a particle detector system;
a sensing device comprising a flow sensor for conducting an upstream measurement of flow through the sampling inlet, wherein the sensing device is operatively connected to a flow data storage;

an extension means providing sealed fluid communication between the connector and sensing device such that a flow path is formed between the sensing device and the sampling inlet via the connector.

Claim 13 (original): Apparatus as claimed in claim 11 wherein the sensing device further comprises comparator means for comparing a measurement of the flow sensor with a prerecorded flow measurement of the sampling inlet stored in the flow data storage.

Claim 14 (currently amended): Apparatus as claimed in claim 12 ~~or 13~~ further comprising an articulated connection intermediate the connector and extension means for providing relative movement between the connector and extension means.

Claim 15 (currently amended): Apparatus as claimed in claim 12 further comprising an articulated connection intermediate the sensing device and extension means for providing relative movement between the sensing device and extension means.

Claim 16 (currently amended): Apparatus as claimed in claim 14 ~~or 15~~ wherein the articulated connection comprises a flexible collar.

Claim 17 (currently amended): Apparatus as claimed in ~~any one of claims~~ claim 10 ~~to 16~~ wherein the flow sensor comprises an ultrasonic sensor.

Claim 18 (original): A method of field testing a particle detector system, the method comprising the steps of:

connecting a flow sensing apparatus to a sampling inlet of an air sampling system;
measuring the air flow rate into the sampling inlet;
comparing the measured air flow with a previously measured air flow at the time of commissioning the detector system;

determining from the comparative measurements whether a component of the detector system requires maintenance.

Claim 19 (original): A method as claimed in claim 18 wherein the component of the detector system comprises any one or more of:

- at least one sampling inlet of an aspirated particle detector system;
- a particle detector;
- a sampling pipe network of an aspirated particle detector system;
- a portion of a sampling pipe network of an aspirated particle detector system; an aspirated particle detector system.

Claim 20 (currently amended): Apparatus adapted to perform one of:

- a) determine an operational condition of a particle detection system;
- b) test the operation of pollution monitoring equipment; or
- c) field test a particle detector system, said apparatus comprising:
processor means adapted to operate in accordance with a predetermined instruction set,

said apparatus, in conjunction with said instruction set, being adapted to perform the method as claimed in ~~any one of claims claim 1 to 9 or 18 to 19.~~

Claim 21 (currently amended): A computer program product comprising:

a computer usable medium having computer readable program code and computer readable system code embodied on said medium for one of

- a) determine an operational condition of a particle detection system;
- b) test the operation of pollution monitoring equipment; or
- c) field test a particle detector system, within a data processing system, said computer program product comprising:

computer readable code within said computer usable medium for performing the method steps of ~~any one of claims~~ claim 1 to 9 or 18 to 19.

Claims 22 and 23: Cancelled.

Kindly add the following new claims:

Claim 24 (new): Apparatus adapted to perform one of:

- a) determine an operational condition of a particle detection system;
- b) test the operation of pollution monitoring equipment; or
- c) field test a particle detector system, said apparatus comprising:

processor means adapted to operate in accordance with a predetermined instruction set, said apparatus, in conjunction with said instruction set, being adapted to perform the method as claimed in claim 18.

Claim 25 (new): A computer program product comprising:

a computer usable medium having computer readable program code and computer readable system code embodied on said medium for one of

- a) determine an operational condition of a particle detection system;
- b) test the operation of pollution monitoring equipment; or
- c) field test a particle detector system, within a data processing system, said computer program product comprising:

computer readable code within said computer usable medium for performing the method steps of claim 18.